Title 33
ENVIRONMENTAL QUALITY
Part III. Air

Chapter 22. Control of Emissions of Nitrogen Oxides (NO_x)

§2201. Affected Facilities in the Baton Rouge Nonattainment Area and the Region of Influence

A. - A.3 …

B. Definitions. Unless specifically defined in this Subsection or in LAC 33:III.111 or 502, the words, terms, and abbreviations in this Chapter shall have the meanings commonly used in the field of air pollution control. For purposes of this Chapter only, the following definitions shall supersede any definitions in LAC 33:III.111 or 502.

* * *

Affected Facility—any facility within the Baton Rouge Nonattainment Area ~~or the Region of Influence~~ with one or more affected point sources that collectively emit or have the potential to emit ~~50~~25 tons or more per year of NO_x, unless exempted in Subsection C of this Section, or any facility within the Region of Influence with one or more affected point sources that collectively emit or have the potential to emit 50 tons or more per year of NO_x, unless exempted in Subsection C of this Section.

* * *

Averaging Capacity—the average actual heat input rate in million British thermal units per hour (MMBtu/hour) at which an affected point source operated during the ozone season of the two calendar years of 2000 and 2001 (e.g., the total heat input for the period divided by the actual hours of operation for the same period). Another period may be used to calculate the averaging capacity if approved by the department. For units with permit revisions that legally curtailed capacity or that were permanently shut down after 1997, the averaging capacity is the average actual heat input during the last two ozone seasons of operation before the curtailment or shutdown.

* * *

Combined Cycle—a combustion equipment configuration that generates electrical or mechanical power with a stationary gas or liquid-fired turbine and/or a stationary internal combustion engine and that recovers heat from the discharge within equipment to heat water or generate steam.

* * *

Low Ozone Season Capacity Factor Boiler or Process Heater/Furnace—a boiler or process heater/furnace in the Baton Rouge Nonattainment Area with maximum rated capacity greater than or equal to 40 MMBtu/hour and ozone season heat input less than or equal to 0.46 x 10^{11} Btu, or in the Region of Influence with maximum rated capacity greater than or equal to 80 MMBtu/hour and ozone season heat input less than or equal to 0.92 x 10^{11} Btu.

* * *

Nitrogen Oxides (NO_x)—the sum of the nitric oxide and nitrogen dioxide in a stream ~~as~~ measured ~~by the test methods~~ in accordance with Subsection G of this Section~~, collectively expressed as nitrogen dioxide~~.

* * *

C. …

1. boilers and process heater/furnaces with a maximum rated capacity of less than 40 MMBtu/hour in the Baton Rouge Nonattainment Area or less than 80 ~~million British thermal units (~~MMBtu~~) per~~/hour in the Region of Influence;

2. stationary gas turbines with a megawatt rating based on heat input of less than 5 MW in the Baton Rouge Nonattainment Area or less than 10 ~~megawatts~~ ~~(~~MW~~)~~ in the Region of Influence;

3. stationary internal combustion engines as follows:

a. rich-burn engines with a rating of less than 150 horsepower (Hp) in the Baton Rouge Nonattainment Area or less than 300 ~~horsepower (~~Hp~~)~~ in the Region of Influence; and

b. lean-burn engines with a rating of less than ~~320~~150 Hp in the Baton Rouge Nonattainment Area or less than 1500 Hp in the Region of Influence; ~~and~~

~~c. lean-burn engines with a rating of less than 1500 Hp in the Region of Influence;~~

4. – 7. …

8. any point source during start-up and shutdown as defined in LAC 33:III.111 or during a malfunction as defined in 40 CFR Section 60.2 (This exemption does not apply to units that are shut down intentionally on a routine basis—more than once per month.);

9. – 20. …

D. Emission Factors

1. The following tables lists NO_x emission factors that shall apply to affected point sources located at affected facilities in the Baton Rouge Nonattainment Area or the Region of Influence.

Table D-1A. Emission Factors for Sources in the Baton Rouge Nonattainment Area		
Category	Maximum Rated Capacity	NO_x Emission Factor [a]
Electric Power Generating System Boilers:		
Coal-fired	>/= 40 to <80 MMBtu/Hour	0.50 pound/MMBtu
	>/= 80 MMBtu/Hour	0.21 pound/MMBtu
Number 6 Fuel Oil-fired	>/= 40 to <80 MMBtu/Hour	0.30 pound/MMBtu
	>/= 80 MMBtu/Hour	0.18 pound/MMBtu
All Others (gaseous or liquid)	>/= 40 to <80 MMBtu/Hour	0.20 pound/MMBtu
	>/= 80 MMBtu/Hour	0.10 pound/MMBtu
Industrial Boilers	>/= 40 to <80 MMBtu/Hour	0.20 pound/MMBtu
	>/= 80 MMBtu/Hour	0.10 pound/MMBtu
Process Heater/Furnaces:		
Ammonia Reformers	>/= 40 to <80 MMBtu/Hour	0.30 pound/MMBtu
	>/= 80 MMBtu/Hour	0.23 pound/MMBtu
All Others	>/= 40 to <80 MMBtu/Hour	0.18 pound/MMBtu
	>/= 80 MMBtu/Hour	0.08 pound/MMBtu
Stationary Gas Turbines:		
Peaking Service, Fuel Oil-fired	>/= 5 to <10 MW	0.37 pound/MMBtu
	>/= 10 MW	0.30 pound/MMBtu
Peaking Service, Gas-fired	>/= 5 to <10 MW	0.27 pound/MMBtu
	>/= 10 MW	0.20 pound/MMBtu
All Others	>/= 5 to <10 MW	0.24 pound/MMBtu [b]
	>/= 10 MW	0.16 pound/MMBtu [c]
Stationary Internal Combustion Engines:		

Table D-1A. Emission Factors for Sources in the Baton Rouge Nonattainment Area		
Category	Maximum Rated Capacity	NO_x Emission Factor [a]
Lean-burn	>/= 150 to <320 Hp	10 g/Hp-hour
	>/= 320 Hp	4 g/Hp-hour
Rich-burn	>/= 150 to <300 Hp	2 g/Hp-hour
	>/= 300 Hp	2 g/Hp-hour

[a] based on the higher heating value of the fuel.
[b] equivalent to 65 ppmv (15 percent O_2, dry basis) with an F factor of 8710 dscf/MMBtu.
[c] equivalent to 43 ppmv (15 percent O_2, dry basis) with an F factor of 8710 dscf/MMBtu.

Table D-1B. Emission Factors for Sources in the Region of Influence		
Category	Maximum Rated Capacity	NO_x Emission Factor [a]
Electric Power Generating System Boilers:		
Coal-fired	>/= 80 MMBtu/Hour	0.21 pound/MMBtu
Number 6 Fuel Oil-fired	>/= 80 MMBtu/Hour	0.18 pound/MMBtu
All Others (gaseous or liquid)	>/= 80 MMBtu/Hour	0.10 pound/MMBtu
Industrial Boilers	>/= 80 MMBtu/Hour	0.10 pound/MMBtu
Process Heater/Furnaces:		
Ammonia Reformers	>/= 80 MMBtu/Hour	0.23 pound/MMBtu
All Others	>/= 80 MMBtu/Hour	0.08 pound/MMBtu
Stationary Gas Turbines:		
Peaking Service, Fuel Oil-fired	>/= 10 MW	0.30 pound/MMBtu
Peaking Service, Gas-fired	>/= 10 MW	0.20 pound/MMBtu
All Others	>/= 10 MW	0.16 pound/MMBtu[b]
Stationary Internal Combustion Engines:		
Lean-burn ~~(Region of Influence)~~	>/= 1500 Hp	4 g/Hp-hour
~~Lean-burn (Baton Rouge Nonattainment Area)~~	~~>/= 320 Hp~~	~~4g/Hp-hour~~
Rich-burn	>/= 300 Hp	2 g/Hp-hour

[a] all factors are based on the higher heating value of the fuel.

[b] equivalent to 4~~2~~3 ppmv (15 percent O_2, dry basis) with an F factor of 8710 dscf/MMBtu.

2. – 3. …

4. For all other affected point sources, the emission factors from Subsection D of this Section shall apply as the mass of NO_x emitted per unit of heat input (pounds NO_x per MMBtu or grams NO_x per Hp-hour), on a 30-day rolling average basis. Alternatively, a facility may choose to comply with a cap as detailed in Paragraph D.3 of this Section, provided that a system, approved by the department, is installed, calibrated, maintained, and operated to demonstrate compliance.

D.5. – F.1. …

a. An owner or operator may obtain approval to install and operate $NO_{~~x~~x}$ control equipment that does not result in ammonia emissions above the minimum emission rate (MER) in LAC 33:III.Chapter 51 by submitting documentation in accordance with LAC 33:III.511. This documentation shall include an estimate of any carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter (PM_{10}), and/or volatile organic compound (VOC) emission increases associated with the NO_x control technology. If approved, the administrative authority shall grant an authorization to construct and operate in accordance with LAC 33:III.501.C.3. Any appropriate permit ~~revision~~ application reflecting the emission reduction shall be submitted to the department and deemed administratively complete no later than 180 days after commencement of operation and in accordance with the procedures of LAC 33:III.Chapter 5.

1.b. - 4. …

5. Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NNSR) Considerations. A significant net emissions increase in NO_x, CO, SO_2, PM_{10}, and/or VOC in accordance with LAC 33:III.504 or 509, that is a direct result of, and incidental to, the installation of NO_x control equipment or implementation of a NO_x control technique required to comply with the provisions of this Chapter shall be exempt from the requirements of LAC 33:III.509 and/or 504, as appropriate, provided the following conditions are met:

a. – b.ii. …

c. notwithstanding the requirements of Table 1 of LAC 33:III.504, ~~any~~ a significant net increase of VOC emissions at an affected facility located in the Baton Rouge Nonattainment Area shall be offset at a ratio of at least 1:1. Offsets shall be surplus, permanent, quantifiable, and federally enforceable and calculated in accordance with LAC 33:III.Chapter 6; and

F.5.d. – G.1. …

2. Emissions testing is required for all point sources that are subject to the emission limitations of Subsection D of this Section or used in one of the alternative plans of Subsection E of this Section. Test results must demonstrate that actual NO_x emissions are in compliance with the appropriate limits of this Chapter. As applicable, CO, SO_2, PM_{10}, ~~oxygen (O_2), NH_3,~~ and VOC shall also be measured if modifications, done to comply with this Chapter, could cause an increase in emissions of any of these compounds. Performance testing of these point sources shall be performed in accordance with the schedule specified in Subsection J of this Section.

G.3. – H. …

1. The owner or operator of boilers that are subject to this Chapter ~~and that have a maximum rated capacity that is equal to or greater than 80 MMBtu/hour~~ shall demonstrate continuous compliance as follows:

a. – b.ii. …

iii. install, calibrate, maintain, and operate a NO_x CEMS to demonstrate continuous compliance with the NO_x emission factors of Subsection D or E of this Section, as applicable. The CEMS shall meet all of the requirements of 40 CFR Part 60.13 and performance specification 2 of 40 CFR 60, Appendix B, or the requirements of 40 CFR Part 75 for units regulated under the Acid Rain Program; and

iv. – vi. …

2. The owner or operator of process heater/furnaces that are subject to this Chapter ~~and that have a maximum rated capacity that is equal to or greater than 80 MMBtu/hour~~ shall demonstrate continuous compliance as follows:

a. – b.vi. …

3. The owner or operator of stationary gas turbines that are subject to this Chapter ~~and that have a megawatt rating based on heat input that is equal to or greater than 10 MW~~ shall demonstrate continuous compliance as follows:

H.3.a. – J.2. …

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2054.

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:290 (February 2002), repromulgated LR 28:451 (March 2002), amended LR 28:1578 (July 2002), LR 29: